A welder’s job is complex and challenging, helping to create an exciting and rewarding lifestyle. No two work days are the same in the life of a professional welder, where they cut, shape and combine materials to create new parts. They pick the materials to be joined or cut, arrange them in an appropriate configuration, then follow a specific design or blueprint to create the desired product. Sometimes a welder has to perform certain melting methods on materials like lead bars to complete a project. Welders are also in charge of fixing structural repairs and making sure welding machinery and equipment is in great shape. They may work in a variety of industries such as construction, engineering, automobile or aerospace. Whichever field is chosen, the tasks tend to be similar across the board.

COC’s Welding Technology program offers an associate degree and certificate of achievement, both with four emphasis options to choose from, as well as two additional certificates of specialization to choose from.

These programs are designed to prepare you for a variety of entry-level positions in today’s welding and fabrication-related industries. Course offerings range from very basic welding fundamentals to the most technologically advanced skills. Through the program you will gain knowledge in safety procedures, applied theory, metal fabrication and related welding processes. Emphasis is placed on individual instruction. Instructors are American Welding Society (AWS) Certified Welding Inspectors/Educators.

Upon completion, you can earn welder certification in accordance with the AWS, The Los Angeles Department of Building and Safety (LADBS), and The American Society of Mechanical Engineers (ASME). You will also be prepared to enter into any of the following career opportunities: welder, welding inspector, welding technician/fitter, pipe fitter/welder or metal fabricator.

Students are required to provide their own personal protection equipment and selected hand tools of an approximate cost of $200.00. A list of equipment and tools are provided the first day of class.

The Welding Technology associate degree and certificate of achievement are a 30-unit program. The following five core courses (15 units) are required regardless of which emphasis you choose:

1. WELD 080 Non-Destructive Testing
2. WELD 130 Welding Metallurgy
3. WELD 132 Blueprint Reading for Welders and Fabricators
4. MFGR 090 Measurements and Computations
5. ENGL 094 Introduction to Technical Reading and Writing
   Or ENGL 204 Technical Report Writing

Select one of the four following emphases, Combination Welder, Metal Fabricator, Industrial Welding, or Pipe Fitting and Robotics, to complete the remaining 15 units.
**Combination Welder** (15 units plus core courses)
Welds metal components together to fabricate or repair products, such as machine parts, plant equipment, mobile homes, motors, and generators, according to layouts, blueprints, or work orders, using one or more arc welding processes. *WELD 101A, *WELD 101B, *WELD 101C, WELD 104, WELD 105, WELD 165, and CWE 188 Welding Internship (1 unit = 60-hour internship).

**Metal Fabricator** (15 units plus core courses)
Metal fabrication consists of shaping metal to a prescribed size, forming, drilling and machining. Places of employment may include off-road fabrication facilities and sheet metal manufacturing plants. WELD 092, WELD 093, WELD 094, WELD 101A, WELD 104, WELD 105, and CWE 188 Welding Internship (2.5 units = 150-hour internship).

**Industrial Welder** (15 units plus core courses)
This option provides an overview of five different welding processes, including oxy fuel welding, shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, and flux core arc welding, as well as three different thermal cutting processes including oxy fuel cutting, plasma arc cutting, and air carbon arc cutting. This program is a more detailed approach to entry level welding, providing a well-rounded background. *WELD 120, *WELD 122, and *WELD 124

**Combination Welding and Robotics Welding Emphasis** (15 units plus core courses)
This program is recommended for those interested in program operations or high production manufacturing environments, such as aerospace, sheet metal manufacturing or structural steel. *WELD 101A, *WELD 101B, *WELD 101C, WELD 114A, WELD 114B, and WELD 114C.

*AWS, American Welding Society Sense Entry Level Welder Program

**How long will it take to complete the Welding program?**
The 30-unit major coursework for both the associate degree and certificate of achievement are the same. Look to the Program Completion Worksheet (page 9) to calculate how long it will take you to complete this program. Note two of the options include “CWE-188” which is an internship. After completing 50 percent of the course, students in good standing are eligible to seek assistance in securing an internship through the Cooperative Work Experience Education program.

<table>
<thead>
<tr>
<th>MAJOR</th>
<th>PROGRAM TYPE</th>
<th>PLUG THESE UNITS IN WORKSHEET TO DETERMINE HOW LONG THIS PROGRAM WILL TAKE YOU TO COMPLETE – PAGE 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding Technology</td>
<td>Associate of Science Degree</td>
<td>30 major + *26 G.E. + 4 elective = 60 Units</td>
</tr>
<tr>
<td>Welding Technology</td>
<td>Certificate of Achievement</td>
<td>30 Units</td>
</tr>
</tbody>
</table>

*G.E. are General Education Units such as math and English, in addition to other requirements.

**Labor Market Information reflects job titles associated with the Welding program:**
- Welder
- Welding Inspector
- Welding Technician/Fitter
- Pipe Fitter/Welder
- Metal Fabricator

For more information about Welding Technology, contact Department Chair Tim Baber
Tim.Baber@Canyons.edu or 661-362-3062
WELDING TECHNOLOGY

College of the Canyons offers the following two certificates of specialization as part of our Welding Technology program:

**Shielded Metal Arc Welding (SMAW) (16.5 units)**
This program is designed for those interested in welding structural steel. Course work includes a comprehensive study with an emphasis on application of fundamental welding techniques and industry practices. Upon completion, you will demonstrate advanced-level skills to produce quality welds in the flat, horizontal, vertical, and overhead positions using the shielded metal arc welding process. As a result, you will be prepared for entry-level employment into industries such as steel construction and maintenance and repair, and general fabrication.

**Robotic Welding Automation (16.5 units)**
This certificate provides training to gain the technical and applied skills required to perform advanced programming and operational tasks as per the American Welding Society (AWS) standards and specifications for robotic welding. Robotic Welding is used in industries such as automotive, aerospace, solar, railroad and steel construction. In the lab, you will learn to safely operate common robotic welding automation systems, while performing advanced programming and welding functions. During lectures, you will analyze the theory and learn the skills necessary for performing advanced programming and operational tasks as per AWS Robotic Arc Welding standards.

**How long will it take to complete the Welding program?**
Both the certificates of achievement are 16.5-unit programs. Look to the Program Completion Worksheet (page 9) to calculate how long it will take you to complete this program.

<table>
<thead>
<tr>
<th>MAJOR</th>
<th>PROGRAM TYPE</th>
<th>PLUG THESE UNITS IN WORKSHEET TO DETERMINE HOW LONG THIS PROGRAM WILL TAKE YOU TO COMPLETE – PAGE 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robotic Welding Automation</td>
<td>Certificate of Specialization</td>
<td>16.5 Units</td>
</tr>
<tr>
<td>Shielded Metal Arc Welding</td>
<td>Certificate of Specialization</td>
<td>16.5 Units</td>
</tr>
</tbody>
</table>

Consult the counseling website to find the current courses required in this program.
www.canyons.edu/Offices/Counseling/Pages/Career-Certificates.aspx

**Labor Market Information reflects job titles associated with the Welding program:**
- Welder • Welding Inspector • Welding Technician/Fitter • Pipe Fitter/Welder • Metal Fabricator
Labor Market Information

<table>
<thead>
<tr>
<th>Where These Jobs Are</th>
<th>5-year Employment Outlook</th>
<th>Annual Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2018</td>
</tr>
<tr>
<td>Local*</td>
<td>2,110</td>
<td>2,068</td>
</tr>
<tr>
<td>California</td>
<td>6,890</td>
<td>6,866</td>
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<tr>
<td>United States</td>
<td>80,937</td>
<td>82,942</td>
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</table>

<table>
<thead>
<tr>
<th>Where These Jobs Are</th>
<th>5-year Employment Outlook</th>
<th>Annual Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2018</td>
</tr>
<tr>
<td>Local*</td>
<td>1,076</td>
<td>1,060</td>
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<tr>
<td>California</td>
<td>3,559</td>
<td>3,665</td>
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<tr>
<td>United States</td>
<td>53,633</td>
<td>57,068</td>
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</table>

<table>
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<tr>
<th>What These Jobs Pay</th>
<th>Wage Range †</th>
<th>Wage Range †</th>
<th>Wage Range †</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local*</td>
<td>$112.20</td>
<td>$20.08</td>
<td>$12.99</td>
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<tr>
<td></td>
<td>$25,376</td>
<td>$41,766</td>
<td>$27,019</td>
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<tr>
<td></td>
<td>$27,186</td>
<td>$40,186</td>
<td>$29,619</td>
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<td>United States</td>
<td>$14.05</td>
<td>$21.09</td>
<td>$14.35</td>
</tr>
<tr>
<td></td>
<td>$29,224</td>
<td>$43,867</td>
<td>$29,848</td>
</tr>
</tbody>
</table>

| College of the Canyons* Geographic region defined as those zip codes within a 50-mile radius of College of the Canyons |
| Wage Range† Data represent 25th and 75th percentile wages (2013) |

For more information about Welding Technology, contact Department Chair Tim Baber |
Tim.Baber@Canyons.edu or 661-362-3062
TRAINING AND PROGRAMS OF STUDY

Career Technical Education (CTE)
Career-focused programs providing academically rigorous and relevant industry training in high-wage and high-employment potential industry sectors, as identified by the State and U.S. Department of Labor. CTE provides specialized training in a specific industry designed to gain entry-level employment and preparation for industry certification exams and licensing requirements.

Occupational (Vocational)
A program of study that focuses on job skills and includes coursework only in a specific vocational area. Career Technical Education (CTE) programs are known as “occupational” programs.

Transfer Program
A community college program which provides the first two years of transferable coursework in preparation for the bachelor’s degree. The first two years are considered to be freshman/sophomore levels at the community college, with the student then completing their junior/senior level courses at the transfer school.

Certificate of Specialization
A specialized CTE program of study granted by the individual CTE department. Units required for a certificate of specialization vary by discipline and require less than 18 units.

Certificate of Achievement
A specialized CTE program of study awarded by the college designed to provide you with entry-level skills for employment. The Certificate of Achievement is comprised of at least 18 units and varies by discipline.

Associate Degree
An Associate Degree is awarded by a community college upon completion of a set program of study, usually done in two years (full-time), though completion time may exceed two years depending on many factors, such as math and English placements and number of units completed each semester.

The associate in arts degree encompasses all liberal arts majors; these are typically non-technical, non-math or science-related majors.

The associate in science degree includes majors related to the technical, math and science fields. Most CTE programs in this catalog are associate in science degrees.

Internships
An internship is an opportunity for students to work for a company for a fixed period of time. An internship can last anywhere from 5 -16 weeks and is typically unpaid. Internships are made possible through an academic course, CWE-188, Cooperative Work Experience Education (CWEE). Internships are intended for students to “test drive” a career option, get your foot in the door, as well as gain “hands-on” experience employers want beyond formal education. Internships are central to career training programs, but any student in any major can apply for an internship. Students must be in good standing to participate and CWE-188 units transfer to the CSU system as elective units.

Associate in Arts – Transfer/Associate in Science- Transfer (AA-T/AS-T)
These degrees are the product of SB 1440 (Padilla): The Student Transfer Achievement Reform Act. The associate in arts or science degree for transfer (AA-T or AS-T) streamlines the transfer admission process to the Cal State University system, with junior standing and guaranteed graduation within 60 units after transfer.

Bachelor’s Degree
A bachelor of arts, bachelor of science, or related degree, awarded upon completion of a program of study, usually done in four years (full-time).

EDUCATIONAL INSTITUTIONS

California Community Colleges
A system of higher education that includes more than 100 colleges and numerous branch campuses and offers certificates, associate degrees and preparation for transfer to a four-year university. College of the Canyons is a community college.

California State University
A system of 23 higher education universities located throughout the State of California that offers bachelor’s, master’s and some doctoral degrees. Examples include California State University, Northridge (CSUN), and California State University, Bakersfield (CSUB).

University of California
A system of nine higher education universities located throughout California that offer bachelor’s, master’s and doctoral degrees. Examples include University of California, Los Angeles (UCLA) and University of California, Davis (UCSD).

Independent and/or Private Colleges and Universities
Includes more than 70 independent colleges and universities throughout California, offering various degrees, levels of academic rigor, educational environments, and majors. University of Southern California (USC) is an example of a private, four-year university.

University Center
The Dr. Dianne G. Van Hook University Center is the facility in which partnering four-year institutions offer educational programs not otherwise available to the residents of Santa Clarita Valley. The University Center is located on the College of the Canyons Valencia campus. Examples of partnering schools offering classes at the University Center include CSU Bakersfield, Brandman University and National University. Admission to any of the University Center programs is handled through individual universities, which confer any degrees earned.

PROGRAM BREAKDOWN

Major
The student’s major field of interest and program of study which, when combined with other requirements, leads to a degree. For example, the Accounting Technician AS degree requires 60 units. Of the 60 units, 22 units are specific target courses in the major. The remaining 38 units come from general education (G.E.) and elective courses.
**General Education**
The General Education Requirement (G.E.) is one of the requirements for a degree. It is a pattern of courses which all students are expected to complete regardless of their major to ensure that they have a broad, basic education such as math, English, and science courses. G.E. is not required of certificate programs though all programs require strong reading and writing skills and critical thinking to be successful.

**Electives**
Courses that are not required, but are taken by the student out of personal interest for unit credit. Using the Accounting Technician AS degree example, the degree requires 60 units. Of the 60 units, 22 units are required in the major, 26 units are G.E., and the remaining 12 units are “elective” where you can select courses of personal interest.

**Prerequisite**
A “prerequisite” refers to an ability, training or experience that the student must have attained before enrolling in the target class. Mastery of a certain body of knowledge is necessary if students are to be successful in the target course (the course that has the prerequisite). Most commonly, such knowledge is measured by the successful completion of a prerequisite course listed in the class schedule. “Successful completion” of a prerequisite course is defined by a passing grade.

Students completing an associate degree will complete college-level math and English. If you are not at college level, you will complete one or more prerequisite courses before you can take the required course.

**Co-requisite**
Enrollment in a companion course is required. The information presented or the practice gained in the co-requisite course is considered necessary for success in the target course.

**Lower Division**
Courses offered for freshman/sophomore-level credit. Also refers to students whose class level is freshman or sophomore. Students transferring to a four-year college typically complete their lower division courses to be eligible to transfer as a junior.

**PACE (Progressive Adult College Education)**
The PACE program is designed for busy adults who often are working full-time jobs and balancing the responsibilities of family and school. PACE courses are hybrid and usually meet on occasional Saturdays and online and are taught in an accelerated format in 8-week sessions. The PACE program is designed to help students prepare for an associate degree or for transfer in five to seven semesters.

**Personalized Accelerated Learning (PAL)**
The PAL program offers coursework in math and English using an accelerated cohort model. Courses are taught in 8-week sessions and are designed to help students take two math or English classes during the same semester. To be eligible for PAL, you must complete an online or face-to-face PAL orientation.

**TAKING CLASSES**

**Application**
The process of submitting a request to be accepted as a student. Submitting an application does not imply you are “enrolled” in college. You have simply applied to eventually enroll.

**Registration**
The official process of selecting your specific courses and having your enrollment confirmed. The process occurs each semester or session in which you wish to be enrolled. Registration occurs at least two months prior to the start of each semester or session, so planning ahead is critical.

**Schedule of Classes**
Posted on the college website each term, the schedule of classes lists the courses offered, class times, instructors’ names, room numbers and important dates to remember.

**College Catalog**
Published once a year, the catalog describes college programs, services, degrees, graduation requirements, academic policies, and courses taught throughout the year. The catalog does not include the day/date/time a course is offered.

**WHEN CLASSES ARE OFFERED**

**Semester System**
Approximately 15 to 16 weeks of instruction offered twice a year during the fall and spring.
- Spring semester typically runs February through May.
- Fall semester typically runs late August through early December.

**Summer Session**
One of the intersessions in which classes are offered in a condensed format ranging from five, six and eight week sessions.
- Summer session takes place June through mid-August.

**Winter Session**
A session in which classes are offered in a condensed format over five weeks. Typically course offerings are limited to general education.
- Winter session takes place in January.
There are four semesters in an academic year; fall, winter, spring and summer. Fall and spring semesters run longer (16 weeks) with hundreds of classes to choose from. The winter and summer classes run shorter (four to 10 weeks) but classes meet longer hours with fewer class offerings.

Students new to college may want to consider starting classes in fall or spring to acclimate to college rigor and expectations before jumping into an accelerated winter or summer session.

<table>
<thead>
<tr>
<th>Classes Begin</th>
<th>Classes End</th>
<th>New Student Registration Begins</th>
<th>*Applications Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter classes begin in January</td>
<td>Winter classes end in January</td>
<td>November - December</td>
<td>July – January</td>
</tr>
<tr>
<td>Spring classes begin in February</td>
<td>Spring Classes end in May</td>
<td>January</td>
<td>July – February</td>
</tr>
<tr>
<td>Summer classes begin in June</td>
<td>Summer classes end in August</td>
<td>May</td>
<td>January – June</td>
</tr>
<tr>
<td>Fall classes begin in August</td>
<td>Fall classes end in December</td>
<td>July</td>
<td>January - August</td>
</tr>
</tbody>
</table>

*Submit your application early to secure an earlier registration date. This will give you the best chance at open classes.

**Get Started**

**Application and Registration**

Before you can register for classes, **every new student must follow the Admissions and Records Check List** found at www.canyons.edu/NewStudent

The college will communicate with you through a college-issued email found on your “My Canyons” account. After you have submitted your online application, you can access your My Canyons account found at www.canyons.edu/MyCanyons

**If you’ve been a student at College of the Canyons but have missed at least one fall or spring semester,** simply submit an online application, found at www.canyons.edu/admissions, during the appropriate time and you will be sent a registration date for the given term as a returning student. Check your My Canyons account for your registration date and time.

**If you are currently attending College of the Canyons,** simply register on your assigned registration date and time.

Be sure to pay for your classes at the time you register. Students who do not pay for classes will be dropped for nonpayment.

**FINANCIAL AID**

The Financial Aid office offers a complete array of financial support services, which are designed to help you with expenses related to your education.

College of the Canyons participates in the following financial aid programs:

- Grants
- Board of Governors Enrollment Fee Waiver Program (BOGW)
- Student Loans
- Scholarships
- Work-study Program

To apply for financial aid, you need to complete the FAFSA or Free Application for Federal Student Aid. Completing and submitting the FAFSA is free and quick, and it gives you access to the largest source of financial aid to pay for college.

Apply online at [www.fafsa.gov](http://www.fafsa.gov)

The COC Financial Aid (FA) website provides all the information needed to successfully navigate the application process. You can also stop by the Financial Aid Office, Monday through Thursday, located on the Valencia and Canyon Country campuses. Check the Financial Aid Office website for current office hours and locations.

[www.canyons.edu/money4college](http://www.canyons.edu/money4college)

[finaid@canyons.edu](mailto:finaid@canyons.edu)

[scholarships@canyons.edu](mailto:scholarships@canyons.edu)

**Valencia Campus**

(661) 362-3215 Phone • (661) 362-5617 Fax

**Canyon Country Campus**

(661) 362-3804 Phone • (661) 362-3808 Fax
<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| Admissions & Records | A&R processes admission applications, transcripts, petitions for graduation and certificates, enrollment verifications, pre-requisite challenges and grades.                                                                   | Valencia: 661-362-3280  
Canyon Country: 661-362-3900  
admissions@canyons.edu  
www.canyons.edu/admissions |
| Child Care       | The Center for Early Childhood Education has half- and full-day early childcare and education services for children of financially qualified students.                                                               | Valencia: 661-362-3501  
Canyon Country: 661-362-3934 |
| Counseling       | Counseling provides educational, career, and personal counseling to students via consultations at the Drop-In Desk, private appointments, courses, and workshops.                                                 | Valencia: 661-362-3288  
Canyon Country: 661-362-3811  
www.canyons.edu/counseling |
| CWEE – Internships | Cooperative Work Experience Education offers internship-seeking assistance. Internships are provided through a college course, CWE-188, earning college credit.                                              | Valencia: 661-362-3309  
internships@canyons.edu  
www.canyons.edu/cwee  
www.canyons.edu/myjobs |
| DSPS             | Disabled Students Programs and Services provides services for students with disabilities in compliance with applicable laws. DSPS has a Hi-Tech Center that offers adaptive access for students with disabilities, in addition to tutoring in selected subjects. | Valencia: 661-362-3314  
Canyon Country: 661-362-3341  
www.canyons.edu/dspsp |
| EOPS & Care      | Extended Opportunity Programs and Services (EODPS) provides support services to educationally disadvantaged students who did not graduate from high school or graduated with less than a 2.5 GPA, who qualify for financial aid. It provides counseling, field trips, financial aid and mentoring. | Valencia: 661-362-3279  
Canyon Country: 661-362-3279  
www.canyons.edu/eops |
| Financial Aid    | The Financial Aid office provides financial aid services, such as fee waivers, grants, scholarships, loans, and work study to students found eligible through the FAFSA application and/or the BOG fee waiver application. | Valencia: 661-362-3215  
Canyon Country: 661-362-3804  
finaid@canyons.edu  
scholarships@canyons.edu  
www.canyons.edu/money4college |
| Job and Career Center | The Job and Career Center offers career assessment, advisement, and job search workshops, including resume writing and interviewing. It also provides job listings for the Santa Clarita Valley and beyond. | Valencia: 661-362-3286 |
| PACE             | Progressive Adult College Education provides working adults the opportunity to take two courses every eight weeks toward specific educational goals. Courses meet evenings & Saturdays.                                         | Valencia: 661-362-3600  
distancelearning@canyons.edu |
| Reentry Services | The Adult Reentry Program assists new, returning and continuing adult students, 28 years of age and older. Services include information sessions, ongoing counseling, free workshops, support groups, as well as campus and community referrals and resource information. | Valencia: 661-362-3469  
www.canyons.edu/adultreentry |
| Student Business Office | The Student Business Office processes registration fees, parking fees, activity cards, library fines, transcripts & verifications, returned check fees, refunds upon student request, student account audits, distribution of payroll & financial aid checks. | Valencia: 661-362-3033  
Canyon Country: 661-362-3901  
sbo@canyons.edu  
www.canyons.edu/sbo |
| TLC              | The Learning Center (TLC) offers freee tutoring in many subjects to enrolled COC students on a walk-in basis.                                                                                                    | Valencia: 661-362-3351  
Canyon Country: 661-362-3857  
www.canyons.edu/TLC |
| Veteran Services | Veteran Services certifies students to receive GI benefits for active duty, recently released from active duty, reserve, National Guard, recently returning from deployment, recently deployed, and dependents of service members with a service connected disability or deceased. | Valencia: 661-362-3469  
Canyon Country: 661-362-3469  
veterans@canyons.edu  
www.canyons.edu/veterans |